

COMPONENTS

FAQ

Q Can my computer play Blu-ray movies?

A A common, but wrong, assumption is that you only need to install a Blu-ray drive such as Pioneer's BDR-202 (reviewed on page 53) to watch HD movies. However, you also need to ensure that both your graphics card and processor are powerful enough.

As a guide, you'll need at least a 2GHz dual-core processor and a graphics card that supports PureVideo HD (Nvidia) or Avivo HD (ATI), as well as having an HDCP-compliant DVI output or HDMI interface. Finally, you'll need playback software such as CyberLink PowerDVD 7.3 (part of DVD Suite Ultra 6, reviewed on page 59). The Gigabyte GA-MA78GM-S2H (above) has integrated ATI graphics that are powerful enough for Blu-ray playback, yet it costs only £64.

Jim Martin

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GIGABYTE GA-MA78GM-S2H

★★★★★

COMPUTER SHOPPER
BUDGET BUY

£64 inc VAT

From www.komplett.co.uk

The GA-MA78GM-S2H is based on AMD's new 780G chipset, which claims to have the fastest onboard graphics processor around. It's called the Radeon HD 3200 and is based on the same design as ATI's HD 3850 and 3870. It supports DirectX 10, has 256MB of dedicated memory and Gigabyte claims that it's good enough to run Crysis.

We allowed the HD 3200 to share an extra 640MB of system memory and found that Crysis would run only on low detail settings at 1,024x768, but it was just about playable at 18.2fps. In our standard Call of Duty 2 test, the HD 3200 managed only 5.3fps. Even after lowering the resolution to 1,024x768, disabling anti-aliasing and anisotropic filtering and reducing textures to low quality, it managed only 12.1fps.

This means there isn't enough power to play the latest titles, but the good news is that you can install a Radeon HD 3450 (ATI's new sub-£30 graphics card) in the PCI-E 16x slot and enable the Hybrid CrossFire feature. This uses both the HD 3200 and HD 3450 graphics processors to provide better performance. Retesting Crysis at the same settings, we found that it ran at 28fps, and Call of Duty 2 increased to 7.4fps.

Although these increases don't lead to outstanding frame rates, a second advantage of installing an HD 3450 is that you can connect up to four monitors. This will be overkill for most people, but the option is there if you need it.

Another benefit of the onboard HD 3200 is its ability to decode H.264 video. This makes the Gigabyte the ideal base for a media centre PC, especially as it's a microATX motherboard, has HDMI, DVI and VGA outputs on the rear panel and has no fans at all.



We installed an Athlon 64 X2 3600+ processor (£26 from www.overclock.co.uk) and were impressed to find that Blu-ray movies played perfectly at 1,920x1,080 and used around 45 per cent of the processor's power.

It's simple to connect the Gigabyte to a surround-sound amplifier thanks to an optical S/PDIF output, and there are mini-jack outputs for analogue 7.1-channel sound. The rear connections also include four USB2 ports, eSATA, gigabit Ethernet and FireWire. Usefully, there are two PS/2 ports, which could free up two USB ports that would otherwise have to be used for a keyboard and mouse. If you need more USB ports, there are an extra four headers on the motherboard.

The 780G chipset supports HyperTransport 3,

which means you'll get the best performance out of AMD's new Phenom processors, but Socket AM2 Athlon 64 X2 and Semprons are also supported.

While the Radeon HD 3200 integrated graphics processor isn't great for games, its HD video playback capabilities are superb. Add the HDMI output and silent running, plus the fact that a basic £26 processor is all that's needed for HD video playback, and the GA-MA78GM-S2H is the best-value motherboard we've seen for use in a media centre PC.

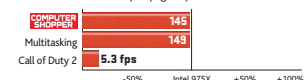
Jim Martin

SUMMARY

- ✓ Capable of Blu-ray playback
- ✓ Inexpensive
- ✓ HDMI and S/PDIF outputs

AMD MOTHERBOARD AM2+ socket, AMD 780G/AMD SB700 chipset, 256MB Radeon HD 3200 graphics, 4x DDR2 667/800/1066 slots, 1x PCI-E x16, 2x PCI, 5x SATA/300, 4x USB2, 1x eSATA, 1x FireWire, 1x 10/100/1,000 Ethernet ports
PART CODE GA-MA78GM-S2H
DETAILS www.giga-byte.com

PERFORMANCE (see page 66)



Also consider...

GIGABYTE GeForce 8800GT

★★★★★

COMPUTER SHOPPER
BEST BUY

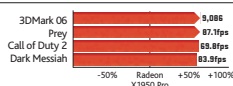
£151 inc VAT

From www.dabs.com

Despite taking up only one slot inside your PC, the GeForce 8800GT is a powerhouse that will have no problems with the latest games, even if you want to play with the highest quality settings. It can also decode HD video, including Blu-ray and HD DVDs, so it's ideal for a Media Center system that will also be used for gaming.



PCI EXPRESS GRAPHICS CARD
Nvidia GeForce 8800GT, PCI-E x16 interface, 512MB GDDR 3 memory running at 900MHz (1.8GHz effective), 600MHz core speed, 2x DVI, TV out
PART CODE GV-NX88T512H-B
DETAILS www.giga-byte.co.uk
FULL REVIEW Mar 2008



COOLER MASTER Hyper TX 2

★★★★★

COMPUTER SHOPPER
BEST BUY

£10 inc VAT

From www.yoyotech.co.uk

If you need a cooler that will work with Intel or AMD processors, you won't find a better bargain than the Hyper TX 2. This processor cooler has three copper heatpipes and a 92mm fan, thus ensuring that your processor is kept cool without making a racket. Furthermore, the Hyper TX 2 runs at 22dBA or less, which is virtually silent.



PROCESSOR COOLER Supports Intel LGA775, AMD Socket AM2 + 939 processors, 92mm fan, 1,700-2,000rpm spin speed, 22dBA max operating volume
PART CODE RR-CCH-L9U1-GP
DETAILS www.coolermaster.co.uk
FULL REVIEW Feb 2008

MSI N9600GT T2D512-OC


**COMPUTER
SHOPPER**
BUDGET BUY

£119 inc VAT

From www.custompcwarehouse.co.uk

MSI's N9600GT is the first graphics card we've seen to use one of Nvidia's new 9-series graphics processors. The GeForce 9600GT is based on the same architecture as the recent 8800GT (see *What's New, Shopper* 241), although it has just 64 stream processors. However, it still benefits from 512MB of GDDR3 RAM and a 256-bit memory interface, which ensures that there's no bottleneck for texture data to get caught in.

It also has PureVideo HD, so high-definition video playback doesn't require much CPU usage, and the two dual-link DVI outputs are HDCP-compliant. The box contains a DVI-to-HDMI convertor and a component video adaptor for the TV-out port.

MSI has overlocked this card from standard GeForce 9600 speeds of 650MHz for the core and 1.8GHz for the memory. The boosted figures of 700MHz and 1.9GHz give a slight increase in frame rates and, considering the low price, the scores from our game tests were surprisingly fast. Call of Duty 2, for example, was only 2.3fps slower than the Gigabyte



8800GT's score. We also saw 80.3fps in Prey, which is only slightly behind the 87.1fps of the 8800GT.

The N9600GT's performance is on a par with Sapphire's Radeon HD 3870 (*What's New, Shopper* 242), which costs over £130. The HD 3870 struggled in Call of Duty 2, scoring only 45.4fps, but its other scores were similar to the 9600GT's.

Using CyberLink's PowerDVD 7.3 and Asus's BC-1205PT BD-ROM, Casino Royale played smoothly at a resolution of 1080p. Vista's Task Manager reported 25 per cent usage of our test rig's Core 2 Quad Q6800 processor, leaving plenty free for other tasks to run in the background.

At this price, the 9600GT is a steal. On paper, the 64 stream processors might look inadequate, but the performance speaks for itself. It thoroughly deserves its Budget Buy award.

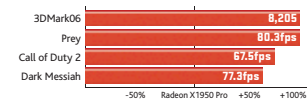
Jim Martin

SUMMARY

- ✓ Excellent value
- ✓ Blu-ray playback
- ✗ Requires two slots

PCI EXPRESS GRAPHICS CARD Nvidia GeForce 9600GT chipset, 700MHz core speed, 512MB DDR3 memory running at 1.90GHz, PCI Express x16 2.0 interface
PART CODE N9600GT-T2D512-OC
DETAILS www.msi.computer.co.uk

PERFORMANCE (see page 66)



COOLER MASTER Cosmos S



£152 inc VAT

From www.ebuyer.com

The Cosmos S is the successor to the Cosmos 1000 (see *What's New, Shopper* 239). It looks almost identical, but Cooler Master has addressed most of the concerns that users had about the 1000.

The full-height front door has gone and there are 10 removable 5¼in mesh panels. We're also glad to see that the ugly plastic venting has been replaced by more black mesh on top. Everything is now made from aluminium, saving around 3kg.

Instead of exposed ports, a sliding panel conceals four USB2 ports, FireWire and eSATA ports plus headphone and microphone mini-jacks. In front of this is a touch-sensitive power button, but there's no reset button. The left side panel has a grille that hides a huge 200mm fan for cooling your graphics card. It doesn't have speed settings, but this and the other three 120mm preinstalled fans can be connected to motherboard headers where the BIOS can control speeds based on temperature.

The 1000 had six transverse hard disk trays with no cooling, while the new case has a single four-disk cage that sits in line with the seven 5¼in bays and has a 120mm fan on the front.

We found the cage fitted too tightly into the case and was difficult to remove and reinstall. Handy push-button release mechanisms mean you can add or remove optical drives in seconds.

The power supply sits at the bottom, where there's a grille and removable air filter, but these are useful only if your power supply has a fan in its base. It's a shame that there's no removable motherboard tray, but with a standard ATX motherboard and a huge Radeon HD 3870X2 installed, there was still around 130mm of clearance between the front of the graphics card and the rear of a standard-length optical drive.

The Cosmos S includes several improvements over the 1000, but the switch to aluminium increases costs and leads to flimsier build quality. Cooling is very good, though, and there's room for dual graphics cards. However, at over £150 without a power supply, it's only for those with plenty of spare cash.

Jim Martin



SUMMARY

- ✓ Masses of space inside
- ✓ Ideal for internal watercooling
- ✗ Expensive; no motherboard tray

ATX CASE 7x 5¼in bays, 4x 3¼in bays (internal), 4x USB2, FireWire, eSATA, audio-in, audio-out ports
PART CODE RC-1100-KKN1-GP
DETAILS www.coolermaster.co.uk

CHOOSING AN...

AMD Motherboard

Follow the steps to find your ideal specs

MOTHERBOARD CHIPSET: AMD 690G

ONBOARD GRAPHICS: Yes

GRAPHICS CARD SLOT: One PCI-E x16

Recommended minimum in grey

- 1** A basic motherboard with the above specifications costs around £55. It will support Socket AM2 Athlon and Sempron processors and, usually with the latest BIOS update, the new Phenoms too. As it has onboard graphics, you can use it for standard Windows applications without having to buy a dedicated graphics card.
- 2** If you want to play games at anything other than the lowest resolutions and lowest detail settings, a PCI-E x16 slot will let you install a dedicated graphics card. If you want to use dual graphics card, you'll need to choose a motherboard that has two PCI-E x16 slots and is compatible with ATI's CrossFire technology. The AMD 570X, 580X and any 7-series chipset supports CrossFire. Some even support CrossFireX which allows you to install four graphics cards.
- 3** If you want to build a Media Center PC, look for a motherboard with on-board graphics capable of H.264 playback, such as the 780G chipset, and one with an HDMI output. You may also want to opt for a microATX motherboard, as this will let you build your PC in a smaller case.
- 4** Choose a motherboard that takes the processor you want to use. The latest AMD socket is AM2+, which will fully support the new power-saving features of Phenom processors. These processors will still work in older Socket AM2 motherboards, but may not perform as well since they don't have HyperTransport 3.
- 5** If you're installing lots of expansion cards, look for a motherboard with plenty of PCI and PCI-E x1 slots. If you're going to install a lot of storage in your PC, a motherboard with plenty of SATA ports is essential. Ideally, it should be one that supports RAID, as this gives you a simple way of improving performance or protecting your data. Finally, ensure that any extras you want are included, like FireWire, eSATA and S/PDIF outputs.